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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,159	12/22/2000	George Beshara Bendak	AMCC4500	2329

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EXAMINER

KADING, JOSHUA A

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 04/13/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,159

Applicant(s)

BENDAK ET AL.

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19-27 and 31 is/are rejected.
- 7) ☒ Claim(s) 9-18, and 28-30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Callon et al. (U.S. Patent 5,251,205).

Regarding claim 1, Callon discloses “a method for translating multidimensional digital frame structures, the method comprising:

receiving a frame with overhead bytes organized in a first system (figure 2C, element 134 where it is known that all packets have overhead such as addresses, parity, type of packet, etc.); and

translating the frame so that the overhead bytes are organized in a second system (figure 2C, elements 138 or 144).”

Regarding claim 2, Callon discloses “the method of claim 1 wherein receiving a frame with overhead bytes organized in a first system includes receiving an overhead byte in a first location (figure 2C, element 134 where the overhead byte must be located in a first location by the very structure of a packet); and

wherein translating the frame so that the overhead bytes are organized in a second system includes relocating the overhead byte to a second location (figure 2C, elements 138 or 144 whereby encapsulating the received frame, the overhead has been placed in a second location, usually the front of the packet)."

Regarding claim 3, Callon discloses "the method of claim 1 wherein receiving a frame with overhead bytes organized in a first system includes receiving an overhead byte having a first value (figure 2C, element 134 where the overhead byte must have a value by its very nature, it cannot be undefined); and

wherein translating the frame so that the overhead bytes are organized in a second system includes replacing the overhead byte with a second value (figure 2C, elements 138 or 144 whereby encapsulating the received packet, the overhead byte has been replaced with a new value)."

Regarding claim 4, Callon discloses "the method of claim 1 wherein receiving a frame with overhead bytes organized in a first system includes receiving a first overhead byte (figure 2C, element 134); and

wherein translating the frame so that the overhead bytes are organized in a second system includes adding a second overhead byte (figure 2C, elements 138 or 144)."

Regarding claim 5, Callon discloses "the method of claim 1 wherein receiving a frame with overhead bytes organized in a first system includes receiving a first overhead byte (figure 2B, element 120 where it is known that all packets have overhead such as addresses, parity, type of packet, etc.); and

wherein translating the frame so that the overhead bytes are organized in a second system includes removing the first overhead byte (figure 2B, element 130 where deencapsulating means removing the first overhead to form a new packet)."

Regarding claim 6, Callon discloses "the method of claim 1 wherein receiving a frame with overhead bytes organized in a first system includes receiving a first byte in a first location (figure 2C, element 134 where the overhead byte must be located in a first location by the very structure of a packet); and

wherein translating the frame so that the overhead bytes are organized in a second system includes replacing the first byte with a second byte, and locating the second byte in a second location, different than the first location (figure 2C, elements 138 or 144 whereby encapsulating the received frame, the overhead has been placed in a second location, usually the front of the packet and the value is different than the first)."

Regarding claim 8, Callon discloses "the method of claim 1 further comprising: preceding the translating of the frame, accessing translation parameters (figure 2C,

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elements 136 where determining the type of packet means access the overhead data to determine whether or not to perform the translation); and

wherein translating the frame so that the overhead bytes are organized in a second system includes translating in response to the accessed translation parameters (figure 2C, elements 138 or 144)."

Claims 19-... are rejected under 35 U.S.C. 102(b) as being anticipated by Van Seters et al. (U.S. Patent 5,651,002).

Regarding claims 19 and 20, Van Seters discloses "an integrated circuit (IC) relay device for translating a multidimensional digital frame structure, the device comprising:

a frame transmitter including an overhead generator to generate the overhead section of a frame, a payload generator to generate the payload section of the frame, and an encoder to provide forward error corrected (FEC) for the frame (col. 6, lines 25-44 where the BMA generates the overhead (header) section, and the FPU puts the overhead and payload (which is stored in the buffer) together; col. 5, lines 34-38 state a error correction code trails the packet, and as can be seen in figure 2, elements 52', 52'', and 52''' trail the packet all through translation, thus there must be an encoder); and

wherein the overhead generator includes an input to receive overhead bytes that have been translated from a first system to a second system (figure 1, where the BMA receives data from different sources)."

It should be noted that if Van Seters claims a transmitter in claim 19 that performs certain task and contains certain parts, then Van Seters claims a receiver (as in claim 20) that must do the same thing.

Regarding claim 21, Van Seters discloses "the overhead receiver receives an overhead byte in a first location (figure 2, where the overhead (header) is in a first location always); and

wherein the overhead generator supplies the overhead bytes relocated to a second location (figure 2, where the translated packet clearly has the overhead in a second location)."

Regarding claim 22, Van Seters discloses "overhead receiver receives an overhead byte having a first value (figure 2, where the overhead is always going to have a first value); and

wherein the overhead generator replaces the overhead byte first value with a second value (figure 2, where the translated overhead has a new overhead)."

Regarding claim 23, Van Seters discloses "overhead receiver receives a first overhead byte (figure 2, where it is clear that each packet has a first overhead byte and must be received if it is transmitted); and

wherein the overhead generator adds a second overhead byte to the frame overhead section (figure 2, where the second overhead byte is added onto 46''')."

Regarding claim 25, Van Seters discloses "the overhead receiver receives a first byte in a first location (figure 2, where the overhead (header) is in a first location always); and

wherein the overhead generator replaces the first byte with a second byte, and locates the second byte in a second location, different than the first location (figure 2, element 46''' where the overhead is replaced and moved to a new location)."

Regarding claim 27, Van Seters discloses "a translator having an input to accept the overhead bytes from the overhead receiver, and an input to accept translation information (col. 6, lines 25-44 where the FPU is the translator and accepts translation information and overhead information from the BMA, which generates the overhead (header) section), and an output connected to the overhead generator to supply overhead bytes translated from a first system to a second system (figure 1, where the BMA can receive and transmit the overhead information)."

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al. in view of Mimura et al. (U.S. Patent 6,557,031 B1).

Regarding claim 7, Callon discloses the method of claim 1. However, Callon lacks what Mimura discloses, that is "wherein the overhead bytes are selected from the group of overhead byte functions including frame synchronization bytes, data communication channel (DCC) bytes, bit interleaved parity (BIP) bytes, Trace bytes, and multiframe alignment signal bytes (figure 14, element 133)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the synchronization bytes with the method of claim 1 for the purpose of aligning the packet data at the receiver. The motivation being that aligning the packet data allows the packet to be properly "read" and decoded when it is received, as is known in the art.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Seters et al. in view of Mimura et al. (U.S. Patent 6,557,031 B1).

Regarding claim 26, Van Seters discloses the device of claim 20. However, Van Seters lacks what Mimura discloses, that is "wherein the overhead bytes are selected from the group of overhead byte functions including frame synchronization bytes, data

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communication channel (DCC) bytes, bit interleaved parity (BIP) bytes, Trace bytes, and multiframe alignment signal bytes (figure 14, element 133).” It would have been obvious to one with ordinary skill in the art at the time of invention to include the synchronization bytes with the device of claim 19 for the purpose of aligning the packet data at the receiver. The motivation being that aligning the packet data allows the packet to be properly “read” and decoded when it is received, as is known in the art.

Claims 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Seters et al. in view of Callon et al.

Regarding claim 24, Van Seters discloses the device of claim 20 and “the overhead receiver receives a first overhead byte (figure 2, where the overhead (header) is in a first location always)...” However, Van Seters lacks what Callon discloses, that is “...the overhead generator removes the first overhead byte from the frame overhead section (figure 2B, element 130 where deencapsulating means removing the first overhead to form a new packet).” It would have been obvious to one with ordinary skill in the art at the time of invention to include the removing of the overhead with the device of claim 20 for the purpose of translating the data into another format for further processing once it has gone as far as it can go (Callon, col. 14, lines 44-49). The motivation being that encapsulated formats of data can utilize networks not specifically designed for that data format.

Regarding claim 31, Van Seters discloses "an integrated circuit (IC) relay system for translating a multidimensional digital frame structure, the system comprising:

a frame receiver including an overhead receiver to receive the overhead section of the frame and an output to supply the overhead bytes, a payload receiver to receive the payload section of the frame, and a decoder to provide a forward error corrected (FEC) frame; a translator having an input to accept the overhead bytes from the overhead receiver, and input to accept translation information, and an output to supply overhead bytes translated from a first system to a second system (col. 6, lines 25-44 where the BMA generates the overhead (header) section, and the FPU puts the overhead and payload (which is stored in the buffer) together; col. 5, lines 34-38 state a error correction code trails the packet, and as can be seen in figure 2, elements 52', 52'', and 52''' trail the packet all through translation, thus there must be an encoder; although Van Seters discloses a transmitter, it is implied the same devices and actions must be taken at a receiving end to properly process the transmitted data);

a frame transmitter including an overhead generator having an input connected to the output of the translator to generate the overhead section of a frame, a payload generator to generate the payload section of the frame, and an encoder to provide forward error corrected (FEC) for the frame (col. 6, lines 25-44 where the BMA generates the overhead (header) section, and the FPU puts the overhead and payload (which is stored in the buffer) together; col. 5, lines 34-38 state a error correction code trails the packet, and as can be seen in figure 2, elements 52', 52'', and 52''' trail the packet all through translation, thus there must be an encoder)..."

However, Van Seters lacks what Callon discloses, that is "a source node having an output to send a frame...a destination node having an input to accept the transmitted frame (figure 1, where there are clearly end nodes that can function as sources and destinations within the network)."

It would have been obvious to one with ordinary skill in the art at the time of invention to include the source and destination nodes with the rest of the system for the purpose of transmitting data packets formatted for one network type across another network type (Callon, col. 10, lines 12-17). The motivation being that being able to transmit different data types across a single network saves resources and cost by sharing the network.

Allowable Subject Matter

Claims 9-18, and 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joshua Kading
Examiner
Art Unit 2661

April 5, 2004



KENNETH VANDERPUYE
PRIMARY EXAMINER